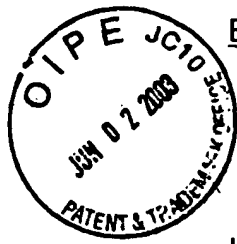2854

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:
James W. Burrell IV

Serial No. 10/071,952

Filed: February 7, 2002

For: VIRTUAL KEYBOARD AND
CONTROL MEANS

Group Art Unit: 2854

Examiner: Charles H. Nolan, Jr.

May 30, 2002

copy paper #9

Hon. Commissioner of Patents and Trademarks

Washington, D.C. 20231

REPLY

Sir:

This is in response to the Office Action dated March 26, 2003.

Claim Rejections - 35 USC § 102

The pending patent application **VIRTUAL KEYBOARD AND CONTROL**

MEANS "invention" is an improvement on an invention the applicant, James W.

Burrell, IV, received Nov.30, 1999 in US patent 5,993,089 entitled: **8-BIT**

BINARY CODE FOR USE AS AN 8-DOT BRAILLE ARRANGEMENT AND

DATA ENTRY SYSTEM AND METHOD FOR 8-KEY CHORDIC BINARY

KEYBOARDS. The eight-bit binary code arrangement of US patent 5,993,089 to

1

Burrell, IV has been changed and improved in the pending patent application, wherein 29 assigned 8-bit data bytes (more than 10%), of a possible 255 8-bit data byte code, have been reassigned different 8-bit binary code representation. The pending patent application also does not have the same limitations as the 8-bit binary code arrangement disclosed in US patent 5,993,089. A one handed person cannot use the invention found in US patent 5,993,089. A one handed person can use the invention found in the pending patent application.

The applicant, James W. Burrell, IV has changed the 8-bit code found in his US patent 5,993,089 as he was developing tutorial web pages for his typing invention found on the deafandblind.com website. The /type/demo.htm file and the /fingerbraille/demo.htm file was created more than one year prior to the date of application for a patent in the United States and was downloaded onto the Internet starting in May 2002, which is less than one year prior to the date of application for a patent in the United States. Therefore, the invention found in the pending patent application was not patented or described in a printed publication or on the Internet in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of this application for a patent in the United States. The changes to the 8-bit code found in US patent 5,993,089 could not have been anticipated by one having ordinary skill in the art or would not have been obvious at the time the invention was made to one having ordinary skill in the art. The improved 8-bit code, expanded specification, independent and dependant claims found in the pending patent application are not taught in the limited specification or claims found in US patent 5,993,089.

Claim Rejections - 35 USC § 103

The invention found in the pending patent application **VIRTUAL KEYBOARD AND CONTROL MEANS** is an improvement on an invention the applicant, James W. Burrell, IV, received Nov.30, 1999 in US patent 5,993,089 entitled: **8-BIT BINARY CODE FOR USE AS AN 8-DOT BRAILLE ARRANGEMENT AND DATA ENTRY SYSTEM AND METHOD FOR 8-KEY CHORDIC BINARY KEYBOARDS**. The 8-bit binary code arrangement found in US patent 5,993,089 has been considerably changed and improved in the pending patent application. The changes to the 8-bit code found in US patent 5,993,089 could not have been anticipated by one having ordinary skill in the art or would not have been obvious at the time the invention was made to one having ordinary skill in the art. Of a possible 255 combinations, 29 assigned 8-bit data bytes have been reassigned different 8-bit binary code representation. The pending patent application also does not have the same limitations as the 8-bit binary code arrangement disclosed and claimed in US patent 5,993,089.

The limitations of the 8-bit binary code found in US patent 5,993,089 requires eight keys or sensors manipulated by four digits of a first left hand group combined with four digits of a second right hand group. A vowel is produced whenever at least one sensor on the first set of four binary sensors is activated by a digit on the first left hand group, and no sensors on the second set of four binary sensors are activated by any digit on the second right hand group. A one handed person cannot use the invention found in US patent 5,993,089.

A one handed person can use the invention found in the pending patent application. The pending patent application requires an 8-bit code read from left to right on at least eight sensors using a first 4-bit code combined with a second 4-bit code. The only limitations of the invention in the pending patent application are when a one handed person enters a vowel with the first 4-bit code it must be followed by the "Enter" 4-bit code, which means the one handed user loses the ability to use the function 8-bit code chords, and when a one handed person wants to enter punctuation it must be preceded by the "Delete" 4-bit code, which means the one handed user loses the ability to use the (Cursor Up), (Control), (Left), (VT-Vertical Tab), (CAN-Cancel), (HOME), (HELP), (Down), (SUB-Substitute), (SO-Shift Out), (SI-Shift In), (Right) and (Alternate) 8-bit code chords.

There are presently five 8-bit binary codes in existence:

1)　　The EBCDIC code (the first 8-bit code created).

2)　　The ASCII code (a seven bit code).

3)　　The Extended ASCII code (a seven bit code).

4)　　The 8-bit code found in US patent 5,993,089.

5)　　The 4-bit code combined with a second 4-bit code found in the pending patent application, which allows a one handed person to use as a means of entering chordic data and allows binary code to be transmitted in 4-bit bytes and not in 8-bit bytes.

The EBCDIC computer code was the first 8-bit computer code ever created. After IBM created the EBCDIC code, IBM obtained a copyright for intellectual property protection. After creating the EBCDIC code, IBM rearranged

the EBCDIC code and created the ASCII computer code. IBM obtained a copyright on the rearranged EBCDIC code, now called the ASCII code, for intellectual property protection. After creating the ASCII code, IBM decided to create the Extended ASCII computer code by assigning data representation to the 128 unused bytes of the parity bit group found in the ASCII code. IBM then obtained a copyright on the Extended ASCII computer code for intellectual property protection. The fourth 8-bit binary computer code invention, found in US patent 5,993,089, is copyright protected and patented protected for intellectual property protection. The fifth 8-bit binary computer code invention, found in the pending patent application, uses a 4-bit code combined with a 4-bit code. EBCDIC uses an 8-bit code. ASCII and Extended ASCII codes use a 7-bit code with a parity bit. The 8-bit binary computer code is found in US patent 5,993,089 requires four fingers of a first left hand group combined with four fingers of a second right hand group to produce an 8-bit code. The pending patent application uses a 4-bit code combined with a 4-bit code to produce an 8-bit computer code.

The differences between the subject matter found in the pending patent application and the prior art subject matter in dispute found in US patent 5,993,089 as a whole does not have the same limitations as the present patent application and would not have been obvious at the time the invention was made to a person having ordinary skill in the art. The differences are:

a) The 8-bit binary code found in US patent 5,993,089 has been reassigned 29 different 8-bit data bytes, of a possible 255 in an 8-bit binary code:

1) The numeric value 3 was changed from the * to the ¤.

2) The numeric value 13 was changed from the NAK to the "(left Quote).

3) The numeric value 27 was changed from the DLE to the ESC.

4) The numeric value 35 was changed from the ƒ to the €.

5) The numeric value 51 was changed from the □ to the £.

6) The numeric value 61 was changed from the RS to the ▌.

7) The numeric value 103 was changed from the á to the à.

8) The numeric value 105 was changed from the ú to the ù.

9) The numeric value 107 was changed from the é to the è.

10) The numeric value 109 was changed from the í to the ì.

11) The numeric value 110 was changed from the ó to the ò.

12) The numeric value 118 was changed from the void 1 to the NAK.

13) The numeric value 122 was changed from the void 3 to the SYN.

14) The numeric value 123 was changed from the É to the void.

15) The numeric value 131 was changed from the void 4 to the ᵈ.

16) The numeric value 147 was changed from the ESC to the Pts.

17) The numeric value 149 was changed from the void 5 to the DLE.

18) The numeric value 165 was changed from the SYN to the *.

19) The numeric value 179 was changed from the FS to the Cruzeiro.

20) The numeric value 181 was changed from the void 6 to the FS.

21) The numeric value 199 was changed from the à to the á.

22) The numeric value 201 was changed from the ù to the ú.

23) The numeric value 202 was changed from the void 9 to the RS.

24) The numeric value 203 was changed from the è to the é.

25) The numeric value 205 was changed from the ì to the í.

26) The numeric value 206 was changed from the ò to the ó.

27) The numeric value 211 was changed from the ▌ to the ₪.

28) The numeric value 251 was changed from the × to the -.

29) The numeric value 252 was changed from the - to the ×.

b) US patent 5,993,089 does not have the monetary currency symbol Euro

€ and the present patent application does have the monetary currency symbol

Euro €. At the time of the original patent application of US patent 5,993,089 to

James W. Burrell, IV, which was written and originally filed on February 3, 1992

by Richard Woodbridge of then Mathews, Woodbridge & Collins in Princeton, NJ,

the Euro € was not used as a currency standard.

c) US patent 5,993,089 does not have the monetary currency symbol
Cruzeiro and the present patent application does have the monetary currency
symbol Cruzeiro.

d) US patent 5,993,089 does not have the monetary currency ¤ symbol

and the present patent application does have the monetary currency ¤ symbol.

e) US patent 5,993,089 does not have the monetary symbol Lira £ and the

present patent application does have the monetary symbol Lira £.

f) US patent 5,993,089 does not have the monetary symbol Peseta Pts and

the present patent application does have the monetary symbol Peseta Pts.

g) US patent 5,993,089 does not have the monetary symbol Sheqel ₪ and

the present patent application does have the monetary symbol Sheqel ₪.

h) US patent 5,993,089 does not have the monetary symbol Dong đ and

the present patent application does have the monetary symbol Dong đ.

i) US patent 5,993,089 does not have the open quote " and closed quote "

symbols and the present patent application does have the open quote " and

closed quote " symbols.

j) US patent 5,993,089 has eleven unused bytes (voids) and the present

patent application has only six unused bytes (voids).

k) The present patent application has changed accented vowel

representation.

l) US patent 5,993,089 shows, explains and claims an only 8-bit binary

code used as a data entry system on eight sensor keyboards, in which a one

handed user could not use, and the pending patent application shows, explains

and claims a first 4-bit code combined with a second for bit code to produce an 8-

bit binary code read from left to right on at least eight sensors.

m) In FIG. 6 of US patent 5,993,089 also shows, explains and claims an 8-

bit binary code used as a standard 8-dot Braille cell arrangement using tactile

separators between each cell for tactile feedback positioning and the pending

patent application shows in FIG. 4A, 4B and 4C and explains a first 4-bit tactile

code combined with a second for bit tactile code without the use of tactile

separators between each cell to produce an 8-bit binary code read from left to

right on at least eight sensors. The inclusion of the unused smaller dot "0"

combined with the used larger dot "1" allows for tactile feedback positioning

8

without the use of tactile separators between each cell when at least one unused bit from either a first 4-bit code or a second 4-bit code is used.

n) US patent 5,993,089 does not have two directional movement controlled by activating a left sensor to move in a first direction or by activating a right sensor to move in a second direction. The virtual keyboard found in the pending patent application does have two directional movement controlled by activating a left sensor to move in a first direction or by activating a right sensor to move in a second direction.

o) US patent 5,993,089 does not have two directional movement controlled by activating a left sensor to move to the left or by activating a right sensor to move to the right. The virtual keyboard found in the pending patent application does have two directional movement controlled by activating a left sensor to move to the left or by activating a right sensor to move to the right.

p) US patent 5,993,089 does not have two directional movement controlled by activating a left sensor to rotate to the left or by activating a right sensor to rotate to the right. The virtual keyboard found in the pending patent application does have two directional movement controlled by activating a left sensor to rotate to the left or by activating a right sensor to rotate to the right.

q) US patent 5,993,089 does not have two directional movement controlled by activating a left sensor to move backward or by activating a right sensor to move forward. The virtual keyboard found in the pending patent application does have two directional movement controlled by activating a left sensor to move backward or by activating a right sensor to move forward.

r) US patent 5,993,089 does not have two directional movement controlled by activating a left sensor to move down or by activating a right sensor to move up. The virtual keyboard found in the pending patent application does have two directional movement controlled by activating a left sensor to move down or by activating a right sensor to move up.

s) US patent 5,993,089 does not have two directional movement controlled by activating a left sensor and a right sensor to move forward, then deactivating a left sensor and a right sensor and then activating a left sensor and a right sensor to move backward. The virtual keyboard found in the pending patent application does have two directional movement controlled by activating a left sensor and a right sensor to move forward, then deactivating a left sensor and a right sensor and then activating a left sensor and a right sensor to move backward.

t) US patent 5,993,089 does not have two directional movement controlled by activating a left sensor to move a cursor to the left or by activating a right sensor to move a cursor to the right. The virtual keyboard found in the pending patent application does have two directional movement controlled by activating a left sensor to move a cursor to the left or by activating a right sensor to move a cursor to the right.

u) US patent 5,993,089 does not have two directional movement controlled by activating a left sensor to delete data to the left of a cursor or by activating a right sensor to delete data to the right of a cursor. The virtual keyboard found in the pending patent application does have two directional

movement controlled by activating a left sensor to delete data to the left of a cursor or by activating a right sensor to delete data to the right of a cursor.

v) US patent 5,993,089 does not have two directional movement controlled by activating a left sensor reverses the last change or by activating a right sensor to reverse the last undo. The virtual keyboard found in the pending patent application does have two directional movement controlled by activating a left sensor reverses the last change or by activating a right sensor to reverse the last undo.

w) US patent 5,993,089 does not have a method of shifting into a second mode by entering at least one data character. The virtual keyboard found in the pending patent application does have a method of shifting into a second mode by entering at least one data character.

x) US patent 5,993,089 does not have a method of shifting into a second mode by entering the language code. The virtual keyboard found in the pending patent application does have a method of shifting into a second mode by entering the language code

y) US patent 5,993,089 does not have a method of shifting into a second mode by entering the country code. The virtual keyboard found in the pending patent application does have a method of shifting into a second mode by entering the country code

z) US patent 5,993,089 does not have a method of shifting into a second mode by entering the country's area code. The virtual keyboard found in the

pending patent application does have a method of shifting into a second mode by entering the country's area code

While the inventor, James W. Burrell, IV, was writing the present patent application he learned to program web pages. Burrell, IV realized that he needed 256 pictures of two hands to teach his method of "fingerbraille" communication for the deaf-blind, his multilingual computer compatible eight dot braille arrangement and his method of blind chordic typing using only eight sensors. 256 pictures of left and right hand finger combinations require more than twice the picture download time than two individual hand pictures would. Burrell, IV decided on using 16 left hand pictures and 16 right hand pictures, which means only 32 pictures are needed to be stored in the computer's buffer. This is not shown, disclosed or claimed in the limitations of US patent 5,993,089, but is shown, disclosed and claimed, in the present patent application, as a first 4-bit code combined with a second 4-bit code.

The rejection of Claims 1-35 under 35 U.S.C 102(b) as anticipated by or, in the alternative, under U.S.C. 103(a) as being obvious over US patent 5,993,089, is respectfully traversed. The present patent application does not have the same limitations as US patent 5,993,089.

With respect to Claims 1, 3, 19 and 20 in the present patent application, Burrell teaches in Claim 1:

An eight bit code read from left to right on at least eight sensors comprising:

a first four bit code combined with a second four bit code to produce data.

In US patent 5,993,089, Burrell teaches:

An eight bit binary code used as a data entry system for a binary eight key or sensor chordic keyboard consisting of:

a first set of four binary sensors for use by four digits of a first hand group; and, means for producing a vowel whenever at least one of said four binary sensors of said first set of four binary sensors is activated by a digit of said first hand group, combined with an unused second set of four binary sensors for a second hand group.

The limitations of US patent 5,993,089 requires an eight binary code, which is not read from left to right, used as a data entry system on a binary eight key or sensor chordic keyboard. The ASCII computer code is a seven bit binary code read from right to left on eight sensors and requires 128 pictures to represent data. The present patent application is teaching, disclosing and claiming an eight bit code read from left to right on at least eight sensors wherein a first four bit code is combined with a second four bit code to produce data. This technique allows for the use of only 32 pictures to represent data. The limitations of US patent 5,993,089 requires 256 pictures to represent data.

With respect to Claims 3 and 4 in the present patent application, Burrell teaches:

3. A method of producing data using an eight bit code read from left to right on at least eight sensors comprising the step of:

activating at least one sensor to enter an eight sensor data entry mode.

4. A method of producing data using an eight bit code read from left to right on at least eight sensors, in accordance with claim 3, comprising the step of:

activating at least one said sensor of said eight sensors to enter an eight sensor data entry mode.

The present patent application is teaching, disclosing and claiming a method of producing data using an eight bit code read from left to right on at least eight sensors wherein activating at least one sensor on a split space bar keyboard, touch screen panel, or any apparatus used for producing data, will enter an eight sensor data entry mode, or by activating at least one sensor on the eight sensors used for producing data.

With respect to Claim 19 in the present patent application, Burrell teaches:

An apparatus for entering an eight bit code read from left to right on at least eight sensors wherein:

a) a first left bit has the numeric value of one and is a left digit sensor, and

b) a second bit has the numeric value of two and is a left digit sensor, and

c) a third bit has the numeric value of four and is a left digit sensor, and

d) a fourth bit has the numeric value of eight and is a left digit sensor, and

e) a fifth bit has the numeric value of sixteen and is a right digit sensor, and

f) a sixth bit has the numeric value of thirty-two and is a right digit sensor, and

g) a seventh bit has the numeric value of sixty-four and is a right digit sensor, and

h) an eighth right bit has the numeric value of one hundred and twenty-eight and is a right digit sensor.

14

The limitations of US patent 5,993,089 requires an eight binary code, which is not read from left to right, used as a data entry system on a binary eight key or sensor chordic keyboard. The present patent application is teaching, disclosing and claiming an eight bit code read from left to right on at least eight sensors wherein a first four bit code is combined with a second four bit code to produce data. US patent 5,993,089 does not disclose or teach an apparatus for entering an 8-bit code read from left to right on at least eight sensors and the left to right scan codes required to produce data electronically through a computer keyboard

With respect to Claim 20 in the present patent application, Burrell teaches:

A method of entering an eight bit code read from left to right on at least eight sensors comprising the step of:

a)   activating one said left digit sensor moves an object in a first direction, and

b)   activating one said right digit sensor moves said object in a second opposite direction.

The limitations of US patent 5,993,089 does not teach, disclose or claim activation of a first sensor to move an object in a first direction and activating a second sensor to move an object in a second opposite direction.

The present patent pending invention was not identically disclosed, patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of this application for patent in the United States. The differences between the improved 8-bit code found in the pending patent application and US patent 5,993,089 to

James W. Burrell, IV would not have been obvious at the time the invention was made to any person having ordinary skill in the art. A one handed person cannot use US patent 5,993,089. The many uses of the virtual keyboard and its many embodiments in the present patent application would not have been obvious at the time the invention was made to any person having ordinary skill in the art. The prior art reference found in US patent 5,993,089 does not teach or claim the manipulation of a first four bit code combined with a second four bit code, but does teach, show and claim an 8-bit code produced using eight fingers (digits) on the front page diagram. A one handed person would not be able to use the invention found in US patent 5,993,089. Therefore, none of the rejections are valid, the claims of the present patent application are patentable and should be allowed.

Respectfully submitted,

EZRA SUTTON, P.A.
Reg. No. 25,770

Plaza 9, 900 Route 9
Woodbridge, New Jersey 07095
(732) 634-3520
ES/jb